

CLAIMS

Please amend the claims as follows:

1. (currently amended) A method in a data processing system of associating a mapping function with a configuration construct of a digital design defined by one or more hardware description language (HDL) files, said method comprising:

in an HDL statement within one of one or more HDL files representing a digital design, specifying a configuration latch within a design entity forming at least a portion of the digital design;

in the one or more HDL files, specifying a Dial defining a relationship between each of a plurality of Dial input values of the Dial and a respective one of a plurality of different Dial output values of the Dial;

in the one or more HDL files, including a statement that instantiates an instance of said Dial in association with said configuration latch such that a one-to-one correspondence exists between a configuration value contained within said configuration latch and [[an]] a Dial input value of said instance of said Dial; and

in the one or more HDL files, including a statement associating the Dial with a mapping function that applies a selected transformation to Dial input values read from or written to said instance of said Dial.

2. (original) The method of Claim 1, wherein including a statement associating the Dial with a mapping function comprises including a statement associating the Dial with a mathematical transformation.

3. (original) The method of Claim 1, wherein including a statement associating the Dial with a mapping function comprises including a statement associating the Dial with a transformation that shifts a value to which said mapping function is applied.

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4. (currently amended) The method of Claim 1, wherein specifying a Dial comprises specifying an Integer Dial (Dial) for which said plurality of Dial input values are integer values.

5. (currently amended) The method of Claim 4 [[3]], wherein said mapping function comprises generation of a pseudo-random integer value.

6. (original) The method of Claim 1, wherein said Dial comprises a read-only Dial.

7-10. (canceled)

11. (currently amended) A data processing system, comprising:

processing resources; and

data storage coupled to said processing resources and including an electronic computer-aided design (ECAD) tool executable by said processing resources, said ECAD tool including:

means for specifying, in an HDL statement within one or more HDL files representing a digital design, a configuration latch within a design entity forming at least a portion of the digital design;

means for specifying, in the one or more HDL files, a Dial defining a relationship between each of a plurality of Dial input values of the Dial and a respective one of a plurality of different Dial output values of the Dial;

means for including, within the one or more HDL files, a statement instantiating instance of said Dial in association with said configuration latch such that a one-to-one correspondence exists between a configuration value contained within said configuration latch and [[an]] Dial input value of said instance of said Dial; and

means for including, within the one or more HDL files, a statement associating the Dial with a mapping function that applies a selected transformation to Dial input values read from or written to said instance of said Dial.

12. (original) The data processing system of Claim 11, wherein said means for including a statement associating the Dial with a mapping function comprises means for including a statement associating the Dial with a mathematical transformation.

13. (original) The data processing system of Claim 11, wherein said means for including a statement associating the Dial with a mapping function comprises means for including a statement associating the Dial with a transformation that shifts a value to which said mapping function is applied.

14. (currently amended) The data processing system of Claim 11, wherein said means for specifying a Dial comprises means for specifying an Integer Dial (JDial) for which said plurality of Dial input values are integer values.

15. (original) The data processing system of Claim 14, wherein said mapping function comprises generation of a pseudo-random integer value.

16. (original) The data processing system of Claim 11, wherein said Dial comprises a read-only Dial.

17-20. (canceled)

21. (currently amended) A program product for associating a mapping function with a configuration construct of a digital design defined by one or more hardware description language (HDL) files, said program product comprising a computer usable medium including:

means for specifying, in an HDL statement within one or more HDL files representing a digital design, a configuration latch within a design entity forming at least a portion of the digital design;

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means for specifying, in the one or more HDL files, a Dial defining a relationship between each of a plurality of Dial input values of the Dial and a respective one of a plurality of different Dial output values of the Dial;

means for including, within the one or more HDL files, a statement instantiating instance of said Dial in association with said configuration latch such that a one-to-one correspondence exists between a configuration value contained within said configuration latch and [[an]] a Dial input value of said instance of said Dial; and

means for including, within the one or more HDL files, a statement associating the Dial with a mapping function that applies a selected transformation to Dial input values read from or written to said instance of said Dial.

22. (original) The program product of Claim 21, wherein said means for including a statement associating the Dial with a mapping function comprises means for including a statement associating the Dial with a mathematical transformation.

23. (original) The program product of Claim 21, wherein said means for including a statement associating the Dial with a mapping function comprises means for including a statement associating the Dial with a transformation that shifts a value to which said mapping function is applied.

24. (currently amended) The program product of Claim 21, wherein said means for specifying a Dial comprises means for specifying an Integer Dial (IDial) for which said plurality of Dial input values are integer values.

25. (original) The program product of Claim 24, wherein said mapping function comprises generation of a pseudo-random integer value.

26. (original) The program product of Claim 21, wherein said Dial comprises a read-only Dial.

27-30. (canceled)

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